

WE CLAIM

- 1 1. A method, comprising:
 - 2 analyzing a transport stream; and
 - 3 preparing the transport stream for processing that bypasses encrypted
 - 4 portions of the transport stream.
- 1 2. A method according to Claim 1, wherein analyzing the transport
- 2 stream includes determining which portions of the transport stream are to pass
- 3 unencrypted.
- 1 3. A method according to Claim 2, wherein determining which portions
- 2 of the transport stream are to pass unencrypted is executed based on a statistical analysis.
- 1 4. A method according to Claim 2, wherein determining which portions
- 2 of the transport stream are to pass unencrypted is executed dynamically.
- 1 5. A method according to Claim 2, wherein determining which portions
- 2 of the transport stream are to pass unencrypted includes determining a permissible
- 3 incursion beyond a packet header to gather data for the processing.
- 1 6. A method according to Claim 2, wherein determining which portions
- 2 of the transport stream are to pass unencrypted includes detecting a data packet
- 3 containing at least a portion of a packetized elementary stream (PES) header.

1 7. A method according to Claim 2, wherein determining which portions
2 of the transport stream are to pass unencrypted includes detecting bytes of data that are
3 required for processing the transport stream.

1 8. A method according to Claim 1, wherein preparing the transport
2 stream for processing includes encrypting portions of the transport stream that are not to
3 pass unencrypted.

1 9. A method according to Claim 1, wherein preparing the transport
2 stream for processing includes encrypting packets containing PES payload data.

1 10. A method according to Claim 1, wherein preparing the transport
2 stream for processing includes leaving a packet containing a portion of a frame header
3 unencrypted.

1 11. A method according to Claim 1, wherein preparing the transport
2 stream for processing includes leaving bytes of data unencrypted that are required for
3 processing the transport stream.

1 12. A method according to Claim 1, wherein preparing the transport
2 stream for processing includes common scrambling packets composed of PES payload
3 data.

1 13. A method according to Claim 1, wherein preparing the transport
2 stream for processing includes:

3 generating a multiplex-compliant encryption method packet; and
4 inserting the multiplex-compliant encryption method packet into the
5 transport stream.

1 14. A method according to Claim 13, wherein the encryption method
2 packet identifies an encryption algorithm used in preparing the transport stream for
3 processing, identifies encrypted portions of the transport stream, and provides data for
4 deriving a decryption key.

1 15. A method according to Claim 13, wherein the encryption method
2 packet identifies an unencrypted portion of the transport stream, a location of the
3 encrypted portion of the unencrypted portion of the transport stream, and a process
4 corresponding to the unencrypted portion of the transport stream.

1 16. A method according to Claim 13, wherein the encryption method
2 packet is delivered via a private table.

1 17. A method, comprising:
2 receiving a partially encrypted transport stream; and
3 processing the transport stream in a manner that bypasses encrypted
4 portions of the transport stream.

1 18. A method according to Claim 17, further comprising:
2 receiving a multiplex-compliant encryption method packet corresponding
3 to the transport stream; and
4 decrypting encrypted portions of the transport stream using a decryption
5 key.

1 19. A method according to Claim 18, wherein the decryption key is
2 included in the encryption method packet or is received in an out-of-band message.

1 20. A method according to Claim 17, wherein processing the transport
2 stream includes demultiplexing the transport stream based on unencrypted portions of the
3 transport stream.

1 21. A method according to Claim 17, wherein processing the transport
2 stream includes indexing payload data contained in the transport stream based on
3 unencrypted portions of the transport stream.

1 22. A computer-readable medium having one or more instructions that
2 are executable by one or more processors, the one or more instructions causing the one or
3 more processors to:

4 determine which portions of a transport stream are to pass unencrypted for
5 processing that disregards encrypted portions of the transport stream; and
6 prepare the transport stream for the processing.

1 23. A computer-readable medium according to Claim 22, wherein the
2 one or more instructions to determine which portions of the transport stream are to pass
3 unencrypted cause the one or more processors to leave unencrypted data packets having
4 at least a portion of a PES header.

1 24. A computer-readable medium according to Claim 22, wherein the
2 one or more instructions to determine which portion of the transport stream are to pass
3 unencrypted cause the one or more processors to leave unencrypted bytes of data required
4 for processing the transport stream.

1 25. A computer-readable medium according to Claim 22, wherein the
2 one or more instructions to determine which portions of the transport stream are to pass
3 unencrypted cause the one or more processors to leave unencrypted a threshold amount
4 of data beyond packet header data that is relevant for the processing.

1 26. A computer-readable medium according to Claim 22, wherein the
2 one or more instructions to prepare the transport stream for the processing cause the one
3 or more processors to encrypt portions of the transport stream that are not to pass
4 unencrypted.

1 27. A computer-readable medium according to Claim 26, wherein the
2 one or more instructions causing the one or more processors to encrypt portions of the
3 transport stream applies an advanced encryption standard (AES)-counter (CTR) mode
4 cipher.

1 28. A computer-readable medium according to Claim 26, comprising
2 one or more further instructions causing the one or more processors to:
3 generate a multiplex-compliant encryption method packet; and
4 insert the multiplex-compliant encryption method packet into the transport
5 stream.

1 29. A computer-readable medium according to Claim 22, wherein the
2 encryption method packet identifies an encryption algorithm used to prepare the transport
3 stream for processing, identifies encrypted portions of the transport stream, and provides
4 at least a basis for key to decrypt the encrypted portions of the transport stream.

1 30. A computer-readable medium according to Claim 22, wherein the
2 encryption method packet identifies an unencrypted portion of the transport stream, a
3 location of the unencrypted portion of the transport stream, and a process associated with
4 the unencrypted portion of the transport stream.

1 31. A computer-readable medium having one or more instructions that
2 are executable by one or more processors, the one or more instructions causing the one or
3 more processors to:
4 receive a partially encrypted transport stream; and
5 process the transport stream based on unencrypted portions of the transport
6 stream.

1 32. A computer-readable medium according to Claim 31, comprising
2 one or more further instructions causing the one or more processors to:

3 receive a multiplex-compliant encryption method packet corresponding to
4 the transport stream; and

5 decrypt encrypted portions of the transport stream using an encryption key
6 based in the encryption method packet.

1 33. A computer-readable medium according to Claim 31, wherein the
2 one or more instructions to process the transport stream cause the one or more processors
3 to demultiplex the transport stream based on unencrypted portions of the transport
4 stream.

1 34. A computer-readable medium according to Claim 31, wherein the
2 one or more instructions to process the transport stream cause the one or more processors
3 to index payload data contained in the transport stream based on unencrypted portions of
4 the transport stream.

1 35. An apparatus, comprising:

2 an analyzer to determine which portions of a transport stream are to pass
3 unencrypted for processing that does not incorporate encrypted portions of the transport
4 stream; and

5 a scrambler to encrypt other portions of the transport stream based on the
6 determination.

1 36. An apparatus according to Claim 35, wherein the analyzer is to
2 dynamically determine that a threshold incursion into payload data is to pass unencrypted
3 in order to process the transport stream without removing the encryption from other
4 portions of the transport stream.

1 37. An apparatus according to Claim 35, wherein the analyzer is to
2 determine that a packet containing at least a portion of a PES header is to pass
3 unencrypted.

1 38. An apparatus according to Claim 35, wherein the analyzer is to
2 determine that data arbitrarily disposed throughout PES payload data are to pass
3 unencrypted.

1 39. An apparatus, comprising:
2 means for determining which portions of a transport stream are to pass
3 unencrypted for processing that does not incorporate encrypted portions of the transport
4 stream; and
5 means for encrypting other portions of the transport stream in accordance
6 with the analysis.

1 40. An apparatus according to Claim 39, wherein the means for
2 determining designates a dynamically determined amount of payload data to pass
3 unencrypted in order to process the transport stream without removing the encryption
4 from other portions of the transport stream.